

This listing of claims will replace all prior versions, and listings, of claims in the application: Listing of Claims:

1. -89. - Cancelled

90. (Currently Amended) A method of treating a neurological disorder selected from the group consisting of peripheral neuropathies caused by physical injury or disease state, physical damage to the brain, physical damage to the spinal cord, stroke associated with brain damage, and neurological disorders relating to neurodegeneration in an animal, comprising:

administering to the animal an effective amount of a compound to stimulate growth of damaged peripheral nerves or to promote neuronal regeneration, where the compound has the formula (I):

$$\begin{array}{c|c}
CH_2)_n \\
R_2 \\
C=S=O \\
R_1 \\
I
\end{array}$$

where

n is 1;

R₁ is selected from the group consisting of hydrogen, C₁-C₉ straight or branched chain alkyl, C₂-C₉ straight or branched chain alkenyl, aryl, heteroaryl, carbocycle, and heterocycle;

D is selected from the group consisting of a bond, C_1 - C_{10} straight or branched chain alkylene, C_2 - C_{10} alkenylene, and C_2 - C_{10} alkynylene;

R₂ is selected from the group consisting of:

wherein said alkyl, alkenyl, alkylene, alkenylene, alkynylene, aryl, heteroaryl, carbocycle, heterocycle, or R_2 is optionally substituted with one or more substituents selected from R_3 , where

R₃ is selected from the group consisting of hydrogen, hydroxy, halo, haloalkyl, thiocarbonyl, alkoxy, alkenoxy, alkylaryloxy, aryloxy, arylalkyloxy, cyano, nitro, imino, alkylamino, aminoalkyl, sulfhydryl, thioalkyl, alkylthio, sulfonyl, C₁-C₆ straight or branched chain alkyl, C₂-C₆ straight or branched chain alkenyl or alkynyl, aryl, heteroaryl, carbocycle, heterocycle, and CO₂R₄ where R₄ is selected from the group consisting of hydrogen, C₁-C₉ straight or branched chain alkyl, and C₂-C₉ straight or branched chain alkenyl;

or a pharmaceutically acceptable salt or solvate thereof.

- 91. (Cancelled) The method of claim 90, wherein the neurological disorder is selected from the group consisting of peripheral neuropathies caused by physical injury or disease state, physical damage to the brain, physical damage to the spinal cord, stroke associated with brain damage, and neurological disorders relating to neurodegeneration.
- 92. (Original) The method of claim 90, wherein the neurological disorder is selected from the group consisting of Alzheimer's Disease, Parkinson's Disease, and amyotrophic lateral sclerosis.

- 93. (Original) The method of claim 90, wherein the neurological disorder is Alzheimer's disease.
- 94. (Original) The method of claim 90, wherein the neurological disorder is amyotrophic lateral sclerosis.
- 95. (Original) The method of claim 90, wherein said compound is non-immunosuppressive.
- 96. (Original) The method of claim 90, wherein the compound is selected from the group consisting of:

$$O = S = O \quad HIN - N$$

$$O = S = O \quad OH$$

$$O = S = O \quad OH$$

97. (Withdrawn) The method of claim 90, further comprising administering a neurotrophic factor different from formula (I).

; and

- 98. (Withdrawn) The method of claim 97, wherein said neurotrophic factor different from formula (I) is selected from the group consisting of neurotrophic growth factor, brain derived growth factor, glial derived growth factor, cilial neurotrophic factor, insulin growth factor and active truncated derivatives thereof, acidic fibroblast growth factor, basic fibroblast growth factor, platelet-derived growth factors, neurotropin-3, and neurotropin 4/5.
- 99. (Currently Amended) A method of treating a neurological disorder selected from the group consisting of peripheral neuropathies caused by physical injury or disease state, physical damage to the brain, physical damage to the spinal cord, stroke associated with brain damage, and neurological disorders relating to neurodegeneration in an animal, comprising:

administering to the animal an effective amount of a compound to stimulate growth of damaged peripheral nerves or to promote neuronal regeneration, where the compound has the formula (I):

I

where

n is 1;

- R₁ is selected from the group consisting of hydrogen, C₁-C₉ straight or branched chain alkyl, C₂-C₉ straight or branched chain alkenyl, aryl, heteroaryl, carbocycle, and heterocycle;
- D is selected from the group consisting of a bond, C_1 - C_{10} straight or branched chain alkylene, C_2 - C_{10} alkenylene, and C_2 - C_{10} alkynylene;
- R₂ is selected from the group consisting of:
- -COOH, -SO₃H, -SO₂HNR₃, -PO₂H, -CN, -PO(OH)(OR₃), -C(O)NHOH, -C(O)NHSO₂R₃, and -CONHCN; wherein said alkyl, alkenyl, alkylene, alkenylene, alkynylene, aryl, heteroaryl, carbocycle, heterocycle, or R₂ is optionally substituted with one or more substituents selected from R₃, where
- R₃ is selected from the group consisting of hydrogen, hydroxy, halo, haloalkyl, thiocarbonyl, alkoxy, alkenoxy, alkylaryloxy, aryloxy, arylalkyloxy, cyano, nitro, imino, alkylamino, aminoalkyl, sulfhydryl, thioalkyl, alkylthio, sulfonyl, C₁-C₆ or branched chain alkyl, C₂-C₆ straight or branched chain alkenyl or alkynyl, aryl, heteroaryl, carbocycle, heterocycle, and CO₂R₄ where R₄ is selected from the group consisting of hydrogen, C₁-C₉ straight or branched chain alkyl, and C₂-C₉ straight or branched chain alkenyl;

or a pharmaceutically acceptable salt, or solvate thereof.

- disorder is selected from the group consisting of peripheral neuropathies caused by physical injury or disease state, physical damage to the brain, physical damage to the spinal cord, stroke associated with brain damage, and neurological disorders relating to neurodegeneration.
- 101. (Original) The method of claim 99, wherein the neurological disorder is selected from the group consisting of Alzheimer's Disease, Parkinson's Disease, and amyotrophic lateral sclerosis.

- 102. (Original) The method of claim 99, wherein the neurological disorder is Alzheimer's Disease.
- 103. (Original) The method of claim 99, wherein the neurological disorder is amyotrophic lateral sclerosis.
- 104. (Original) The method of claim 99, wherein said compound is non-immunosuppressive.
- 105. (Previously Presented) The method of claim 99, wherein the compound is selected from the group consisting of:
 - (2S)-1-(phenylmethyl)sulfonyl-2-hydroxymethyl pyrrolidine;

COOH

O=
$$s=0$$

COOH

O= $s=0$

- 106. (Withdrawn) The method of claim 105, further comprising administering a neurotrophic factor different from formula (I).
- 107. (Withdrawn) The method of claim 106 wherein said neurotrophic factor different from formula (I) is selected from the group consisting of neurotrophic growth factor, brain derived growth factor, glial derived growth factor, cilial neurotrophic factor, insulin growth factor and active truncated derivatives thereof, acidic fibroblast growth factor, basic fibroblast growth factor, platelet-derived growth factors, neurotropin-3, and neurotropin 4/5.
 - 108. (Previously Presented) The method of claim 90, wherein D is a bond.
- 109. (Previously Presented) The method of claim 90, wherein R_3 is not cyano.
 - 110. (Previously Presented) The method of claim 99, wherein D is a bond.
- 111. (Previously Presented) The method of claim 99, wherein R_3 is not cyano.